CLAIMS

1. A method for electroless plating, wherein:

the method for electroless plating is that for applying to a polymer electrolyte;

the method for electroless plating contains a pre-treatment step;

the pre-treatment step is a swelling step for swelling the polymer electrolyte by means of permeation of a good solvent or a mixed solvent containing a good solvent; and

the swelling step is a step for making a thickness of the polymer electrolyte in a swollen state to be 110% or more that of the polymer electrolyte in a dry state.

2. The method for electroless plating for applying to a polymer electrolyte as claimed in claim 1, characterized in that the swelling step is a step for making a thickness of the polymer electrolyte in a swollen state to be 110 to 3000% with respect to that of the polymer electrolyte in a dry state.

3. A method for manufacturing a laminate comprising a metal layer and a polymer electrolyte, wherein:

the manufacturing method is that for applying electroless plating to a polymer electrolyte;

the method for electroless plating contains a

pre-treatment step;

the pre-treatment step is a swelling step for swelling the polymer electrolyte by means of permeation of a good solvent or a mixed solvent containing a good solvent;

the swelling step is a step for making a thickness of the polymer electrolyte in a swollen state to be 110% or more that of the polymer electrolyte in a dry state;

after the swelling step, an adsorption step and a reduction step are carried out;

the adsorption step is a step for adsorbing a metal complex to the polymer electrolyte; and

the reduction step is a step for allowing a reductant solution to be in contact with the polymer electrolyte to which the metal complex has been adsorbed.

4. The method for manufacturing a laminate as claimed in claim 3, characterized in that the swelling step allows a good solvent or a mixed solvent containing a good solvent to permeate into the polymer electrolyte, whereby a degree of crystallization of the polymer electrolyte is reduced, so that intertwist of side chains containing at least functional groups in a polymer constituting the polymer electrolyte is moderated.

5. The method for manufacturing a laminate as claimed in claim 3 or 4, wherein the good solvent is methanol.

6. The method for manufacturing a laminate as claimed in claim 3 or 4, wherein the polymer electrolyte is an ion-exchange resin, and the good solvent is a mixed solution consisting of a basic salt and methanol.

7. A method for electroless plating, wherein:

the method for electroless plating is that for applying to a polymer electrolyte;

the method for electroless plating contains a pre-treatment step;

the pre-treatment step is a swelling step for swelling the polymer electrolyte by means of permeation of an aqueous solution of a salt; and

the swelling step is a step for making a thickness of the polymer electrolyte in a swollen state to be 110% or more that of the polymer electrolyte in a dry state.

8. A method for manufacturing a laminate comprising a metal layer and a polymer electrolyte, wherein:

the manufacturing method is that for applying electroless plating to a polymer electrolyte;

the method for electroless plating contains a pre-treatment step;

the pre-treatment step is a swelling step for swelling

the polymer electrolyte by means of permeation of an aqueous solution of a salt;

the swelling step is a step for making a thickness of the polymer electrolyte in a swollen state to be 110% or more that of the polymer electrolyte in a dry state;

after the swelling step, an adsorption step and a reduction step are carried out;

the adsorption step is a step for adsorbing a metal complex to the polymer electrolyte; and

the reduction step is a step for allowing a reductant solution to be in contact with the polymer electrolyte to which the metal complex has been adsorbed.

9. A laminate comprising an electrode layer and a polymer electrolyte layer, wherein the electrode layer is a metal layer, and an electric double layer capacity in an interface of the electrode layer and the polymer electrolyte layer measured by cyclic voltammetry is 3 mF/cm^2 or more as a value converted in such that a dry film thickness of the polymer electrolyte is 170 μm.

10. A laminate comprising an electrode layer and a polymer electrolyte layer, wherein the electrode layer is a metal layer, and an electric double layer capacity in an interface of the electrode layer and the polymer electrolyte layer measured by

a constant current discharge method is 2.0 F/cm^3 or more.

11. Positioning devices, posture control systems, lifting and lowering equipment, carrier devices, travelling apparatuses, regulating machines, adjusting devices, guidance systems, hinge joint means, switching arrangements, reversing means, take-up units, traction apparatuses, and swing devices, wherein the laminate as claimed in claim 9 or 10 is used for a driving part thereof.

12. Pressing means wherein the laminate as claimed in claim 9 or 10 is used for a pressing part thereof.